

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING **ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: _____

Source: _____

Date Processed by STIC: _____

10/561,691
JFWP
01/11/2007

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 4.4.0 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<**<http://www.uspto.gov/ebc/efs/downloads/documents.htm>**> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/10/06



IFWP

RAW SEQUENCE LISTING

DATE: 01/11/2007

PATENT APPLICATION: US/10/561,691

TIME: 10:31:01

Input Set : A:\Sequence Listing 36759-20005.00.txt

Output Set: N:\CRF4\01112007\J561691.raw

4 <110> APPLICANT: Kazakov, Sergei A.
 5 Dallas, Anne
 6 Kuo, Tai-Chih
 7 Johnston, Brian H.
 9 <120> TITLE OF INVENTION: Polynucleotides Capable of
 10 Target-Dependent Circularization and Topological Linkage
 13 <130> FILE REFERENCE: 367592000500
 15 <140> CURRENT APPLICATION NUMBER: 10/561,691
 16 <141> CURRENT FILING DATE: 2005-12-21
 18 <150> PRIOR APPLICATION NUMBER: PCT/US2004/020589
 19 <151> PRIOR FILING DATE: 2004-06-25
 21 <150> PRIOR APPLICATION NUMBER: US 60/482,653
 22 <151> PRIOR FILING DATE: 2003-06-25
 24 <160> NUMBER OF SEQ ID NOS: 50
 26 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 28 <210> SEQ ID NO: 1
 29 <211> LENGTH: 74
 30 <212> TYPE: DNA
 31 <213> ORGANISM: Artificial Sequence
 33 <220> FEATURE:
 34 <223> OTHER INFORMATION: Synthetic Construct
 36 <400> SEQUENCE: 1
 37 cggtccgtatg acgagagaag ctgaccagag aaacacacga cgtaagtcgt ggtacattac 60
 38 ctggtaacag aggc 74
 40 <210> SEQ ID NO: 2
 41 <211> LENGTH: 69
 42 <212> TYPE: DNA
 43 <213> ORGANISM: Artificial Sequence
 45 <220> FEATURE:
 46 <223> OTHER INFORMATION: Synthetic Construct
 48 <400> SEQUENCE: 2
 49 tgttggtgtt gttgttggtt tgcttatgtc tcagcctctg ttaccaggta atgtaccacg 60
 50 acttacgtc 69
 52 <210> SEQ ID NO: 3
 53 <211> LENGTH: 51
 54 <212> TYPE: DNA
 55 <213> ORGANISM: Artificial Sequence
 57 <220> FEATURE:
 58 <223> OTHER INFORMATION: Synthetic Construct
 60 <400> SEQUENCE: 3
 61 taatacgact cactataggg cagccgtcct cggtccgtatg acgagagaag c 51
 63 <210> SEQ ID NO: 4
 64 <211> LENGTH: 45

Does Not Comply
Corrected Diskette Needed
Cp8-3?

RAW SEQUENCE LISTING

DATE: 01/11/2007

PATENT APPLICATION: US/10/561,691

TIME: 10:31:01

Input Set : A:\Sequence Listing 36759-20005.00.txt

Output Set: N:\CRF4\01112007\J561691.raw

65 <212> TYPE: DNA
66 <213> ORGANISM: Artificial Sequence
68 <220> FEATURE:
69 <223> OTHER INFORMATION: Synthetic Construct
71 <400> SEQUENCE: 4
72 tatgacgagg acggtctggtt gttgttggtt ttgttggtgt tgtgc 45
74 <210> SEQ ID NO: 5
75 <211> LENGTH: 45
76 <212> TYPE: DNA
77 <213> ORGANISM: Artificial Sequence
79 <220> FEATURE:
80 <223> OTHER INFORMATION: Synthetic Construct
82 <400> SEQUENCE: 5
83 tatgacgagg acggtctgatt gttgttggtt ttgttggtgt tgtgc 45
85 <210> SEQ ID NO: 6
86 <211> LENGTH: 45
87 <212> TYPE: DNA
88 <213> ORGANISM: Artificial Sequence
90 <220> FEATURE:
91 <223> OTHER INFORMATION: Synthetic Construct
93 <400> SEQUENCE: 6
94 tatgacgagg acggtctgagt gttgttggtt ttgttggtgt tgtgc 45
96 <210> SEQ ID NO: 7
97 <211> LENGTH: 45
98 <212> TYPE: DNA
99 <213> ORGANISM: Artificial Sequence
101 <220> FEATURE:
102 <223> OTHER INFORMATION: Synthetic Construct
104 <400> SEQUENCE: 7
105 tatgacgagg acggtctgaga gttgttggtt ttgttggtgt tgtgc 45
107 <210> SEQ ID NO: 8
108 <211> LENGTH: 45
109 <212> TYPE: DNA
110 <213> ORGANISM: Artificial Sequence
112 <220> FEATURE:
113 <223> OTHER INFORMATION: Synthetic Construct
115 <400> SEQUENCE: 8
116 tatgacgagg acggtctgaga cttgttggtt ttgttggtgt tgtgc 45
118 <210> SEQ ID NO: 9
119 <211> LENGTH: 45
120 <212> TYPE: DNA
121 <213> ORGANISM: Artificial Sequence
123 <220> FEATURE:
124 <223> OTHER INFORMATION: Synthetic Construct
126 <400> SEQUENCE: 9
127 tatgacgagg acggtctgaga catgttggtt ttgttggtgt tgtgc 45
129 <210> SEQ ID NO: 10
130 <211> LENGTH: 17
131 <212> TYPE: DNA

RAW SEQUENCE LISTING

DATE: 01/11/2007

PATENT APPLICATION: US/10/561,691

TIME: 10:31:01

Input Set : A:\Sequence Listing 36759-20005.00.txt

Output Set: N:\CRF4\01112007\J561691.raw

```

132 <213> ORGANISM: Artificial Sequence
134 <220> FEATURE:
135 <223> OTHER INFORMATION: Synthetic Construct
137 <400> SEQUENCE: 10
138 gcttctctcg tcatacg 17
140 <210> SEQ ID NO: 11
141 <211> LENGTH: 28
142 <212> TYPE: DNA
143 <213> ORGANISM: Artificial Sequence
145 <220> FEATURE:
146 <223> OTHER INFORMATION: Synthetic Construct
148 <400> SEQUENCE: 11
149 taatacgact cactataggg cagccgctc 28
151 <210> SEQ ID NO: 12
152 <211> LENGTH: 29
153 <212> TYPE: DNA
154 <213> ORGANISM: Artificial Sequence
156 <220> FEATURE:
157 <223> OTHER INFORMATION: Synthetic Construct
159 <400> SEQUENCE: 12
160 ggtgacacta tgatgcatat gacgaggac 29
162 <210> SEQ ID NO: 13
163 <211> LENGTH: 59
164 <212> TYPE: RNA
165 <213> ORGANISM: Artificial Sequence
167 <220> FEATURE:
168 <223> OTHER INFORMATION: Synthetic Construct
W--> 170 <221> NAME/KEY: misc_feature
171 <222> LOCATION: 1-5, 10, 13-19, 27-35, 41-48, 54, 56-60
172 <223> OTHER INFORMATION: n = A, U, G or C
W--> 174 <221> misc_feature
175 <222> LOCATION: 6
176 <223> OTHER INFORMATION: n = U, C or G
W--> 178 <221> misc_feature
179 <222> LOCATION: 7, 11, 49
180 <223> OTHER INFORMATION: n = U or C
W--> 182 <221> misc_feature
183 <222> LOCATION: 8, 25
184 <223> OTHER INFORMATION: n = A, C or U
W--> 186 <221> misc_feature
187 <222> LOCATION: 12
188 <223> OTHER INFORMATION: n = A or G
W--> 190 <221> misc_feature
191 <222> LOCATION: (55)...(55)
192 <223> OTHER INFORMATION: n = A, C or G
W--> 194 <400> 13
W--> 195 nnnnnnnnca nnnnnnnnca uuananhnann nnnncaaagn nnnnnnnnnga agnnnnnnnn 59
197 <210> SEQ ID NO: 14
198 <211> LENGTH: 22

```

'c' at this location

'c' at this location

'a' at this location

'n' at 40

'n' at this location

RAW SEQUENCE LISTING

DATE: 01/11/2007

PATENT APPLICATION: US/10/561,691

TIME: 10:31:01

Input Set : A:\Sequence Listing 36759-20005.00.txt

Output Set: N:\CRF4\01112007\J561691.raw

```

199 <212> TYPE: RNA
200 <213> ORGANISM: Artificial Sequence
202 <220> FEATURE:
203 <223> OTHER INFORMATION: Synthetic Construct
205 <400> SEQUENCE: 14
206 ucggaacagg gaacuucucu ug                               22
208 <210> SEQ ID NO: 15
209 <211> LENGTH: 119
210 <212> TYPE: RNA
211 <213> ORGANISM: Artificial Sequence
213 <220> FEATURE:
214 <223> OTHER INFORMATION: Synthetic Construct
216 <400> SEQUENCE: 15
217 ccagucaaga gaaguucccu guuccgagcc cuuuuuuuucc uugucccuug aagagaacug 60
218 guccauuaua ugguguugca cacaaagaga ccaacugaag agacaguaug ccuguccug 119
220 <210> SEQ ID NO: 16
221 <211> LENGTH: 139
222 <212> TYPE: RNA
223 <213> ORGANISM: Artificial Sequence
225 <220> FEATURE:
226 <223> OTHER INFORMATION: Synthetic Construct
W--> 228 <221> NAME/KEY: misc_feature
229 <222> LOCATION: (39)...(58)
230 <223> OTHER INFORMATION: n = A, G, C or U
W--> 232 <400> 16
W--> 233 cugcuccugc cgaccaacaa caacaacaac aaauagagnn nnnnnnnnnn nnnnnnnnca 60
234 augguccauu acauggugcu gaaugcagca cacaaagaga ccagucgaag agagcaguau 120
235 gccuguccu gccgacggg                                     139
237 <210> SEQ ID NO: 17
238 <211> LENGTH: 122
239 <212> TYPE: RNA
240 <213> ORGANISM: Artificial Sequence
242 <220> FEATURE:
243 <223> OTHER INFORMATION: Synthetic Construct
W--> 245 <221> NAME/KEY: misc_feature
246 <222> LOCATION: (30)...(49)
247 <223> OTHER INFORMATION: n = A, G, C or U
W--> 249 <400> 17
W--> 250 ccgaccaaca acaacaacaa caauaagagn nnnnnnnnnn nnnnnnnnnc aaugguccau 60
251 uacauggugc ugaaugcagc acacaaagag accagucgaa gagagcagua ugccugucc 120
252 ug                                                         122
254 <210> SEQ ID NO: 18
255 <211> LENGTH: 142
256 <212> TYPE: RNA
257 <213> ORGANISM: Artificial Sequence
259 <220> FEATURE:
260 <223> OTHER INFORMATION: Synthetic Construct
W--> 262 <221> NAME/KEY: misc_feature
263 <222> LOCATION: (18)...(22)

```

RAW SEQUENCE LISTING

DATE: 01/11/2007

PATENT APPLICATION: US/10/561,691

TIME: 10:31:01

Input Set : A:\Sequence Listing 36759-20005.00.txt

Output Set: N:\CRF4\01112007\J561691.raw

```

264 <223> OTHER INFORMATION: n = A, C, G or U
W--> 266 <400> 18
W--> 267 auacugcucc ugccgacnnn nnacaacaac aacaacaaca acacggauac agagucggag 60
268 acaauggucc auuacauggu gcugaaugca gcacacaaag agaccagucg aagagaccug 120
269 uaugccaggu ccugccgacg gg 142
271 <210> SEQ ID NO: 19
272 <211> LENGTH: 10
273 <212> TYPE: RNA
274 <213> ORGANISM: Artificial Sequence
276 <220> FEATURE:
277 <223> OTHER INFORMATION: Synthetic Construct
279 <400> SEQUENCE: 19
280 ccgacucugu 10
282 <210> SEQ ID NO: 20
283 <211> LENGTH: 10
284 <212> TYPE: RNA
285 <213> ORGANISM: Artificial Sequence
287 <220> FEATURE:
288 <223> OTHER INFORMATION: Synthetic Construct
290 <400> SEQUENCE: 20
291 ccgacucuga 10
293 <210> SEQ ID NO: 21
294 <211> LENGTH: 10
295 <212> TYPE: RNA
296 <213> ORGANISM: Artificial Sequence
298 <220> FEATURE:
299 <223> OTHER INFORMATION: Synthetic Construct
301 <400> SEQUENCE: 21
302 ccgacucuca 10
304 <210> SEQ ID NO: 22
305 <211> LENGTH: 10
306 <212> TYPE: RNA
307 <213> ORGANISM: Artificial Sequence
309 <220> FEATURE:
310 <223> OTHER INFORMATION: Synthetic Construct
312 <400> SEQUENCE: 22
313 ccgacucaca 10
315 <210> SEQ ID NO: 23
316 <211> LENGTH: 10
317 <212> TYPE: RNA
318 <213> ORGANISM: Artificial Sequence
320 <220> FEATURE:
321 <223> OTHER INFORMATION: Synthetic Construct
323 <400> SEQUENCE: 23
324 ccgacuaaca 10
326 <210> SEQ ID NO: 24
327 <211> LENGTH: 10
328 <212> TYPE: RNA
329 <213> ORGANISM: Artificial Sequence

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/561,691

DATE: 01/11/2007
TIME: 10:31:02

Input Set : A:\Sequence Listing 36759-20005.00.txt
Output Set: N:\CRF4\01112007\J561691.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:13; N Pos. 1,2,3,4,5,6,7,8,10,11,12,13,14,15,16,17,18,24,26,27,28,29

Seq#:13; N Pos. 30,31,32,33,34,40,41,42,43,44,45,46,47,48,53,54,55,56,57,58

Seq#:13; N Pos. 59

Seq#:16; N Pos. 39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58

Seq#:17; N Pos. 30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49

Seq#:18; N Pos. 18,19,20,21,22

VERIFICATION SUMMARY

DATE: 01/11/2007

PATENT APPLICATION: US/10/561,691

TIME: 10:31:02

Input Set : A:\Sequence Listing 36759-20005.00.txt

Output Set: N:\CRF4\01112007\J561691.raw

L:170 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:174 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:178 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:182 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:186 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:190 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:194 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:195 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:228 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:232 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:16
L:233 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:245 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:249 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17
L:250 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:262 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:266 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18
L:267 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0